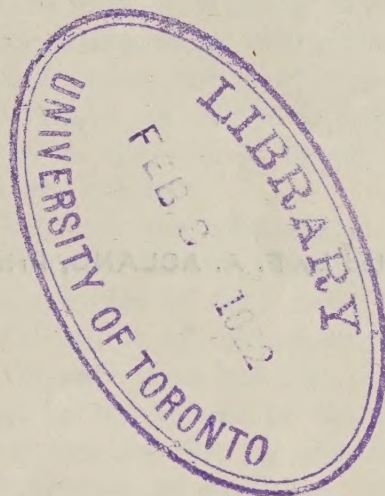


Gov. Doc.
Can
Ag.

Canada Agric. Dep.

THE OUTLOOK FOR DAIRYING AND THE MARKETING OF DAIRY PRODUCE

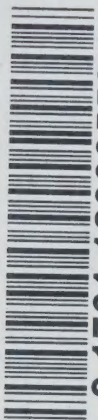
By J. A. RUDDICK Dairy and Cold Storage Commissioner



DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
PAMPHLET No. 3 — NEW SERIES

The Dairy and Cold Storage Branch

Published by direction of the Hon. W. R. MOTHERWELL, Minister of Agriculture.
Ottawa, 1922



3 1761 12000553 3

Printed by F. A. ACLAND, Printer to the King's Most Excellent Majesty

THE OUTLOOK FOR DAIRYING

An Address Delivered by J. A. Ruddick, Dairy Commissioner, before the Annual Convention of the Eastern Ontario Dairymen's Association, Ottawa, January 5, 1922, and printed at the request of the Association

IT is now over three years since the close of the Great War, which had such a disturbing effect on all industries, not excepting the dairying industry. Reconstruction, as it is called, is not even yet completed, but the position with respect to the dairy industry is clearer than it was, and the present seems to be a good time to take stock of the situation in order to determine as far as may be possible what the future has in store for us.

Mr. George Goodsir, of the well-known produce firm of William Weddell & Co., London, England, in an address which he recently delivered on reconstruction, when speaking of the effect of Government control of industries and commerce during the war stated that "whatever evil it may have wrought in other directions it has revealed to the world of commerce that much good in the way of broad results may be done by joint action for the common good of an industry."

Speaking of the dairy industry in particular, and the advantages and disadvantages of Government control, he stated that "it will be surprising if the future does not witness material changes in the general conduct of that great trade. The purchase by the Government of a whole season's output of cheese or butter from New Zealand or Argentine at an all-round price in each case has put ideas into the minds of producers which are likely to bear fruit in the future in the direction of securing some sort of general supervision in each country for the standardizing of grades of quality, identity in terms of sale, regulation of shipment and approximation of selling price, all of which must inevitably tend to the welding of each country's export trade into an harmonious whole, possibly after the fashion of the Danish butter sale, which is very strictly controlled by the consent of the shippers for the general good rather than in the interest of individuals."

This is the reasoned opinion of a man at the head of a firm whose business is world wide, a man who is accustomed to thinking internationally, and whose judgment in such a matter is worthy of the highest respect.

A BROAD OUTLOOK NECESSARY

In order to take stock of the situation intelligently we must look at it from the widest possible viewpoint. If we confine our inquiry to Canada alone we are dealing with only one factor among the many which affect the situation. The trade in dairy products is international, and as far as prices are determined by the law of supply and demand, it is supply and demand operating on a world-wide basis. The Canadian surplus of butter and cheese is important only as it adds to the world's total supply. Local conditions affect the situation very little, if at all.

This world-wide production of an article for a common market makes for stability, because so many producing countries, some with opposite seasons of flush production, and all with varying climatic conditions, produce an average result one year with another. Unusual production in any one country is most likely to be balanced by the other extreme in other countries.

In this respect the dairy producers are more fortunate than those farmers who are engaged in producing anything that must find a local market, in which case a big crop is usually followed by a corresponding slump in prices. An unusually big production of milk in Canada does not seriously affect world's prices, because it is such a small part of the world's total surplus.

The war demands undoubtedly developed new sources of supply and some of these may become permanent. The producer may some day be ready to believe that it would have been a wiser policy in the long run to have taken a lower price for some things during the war and thus avoided the new competition which has arisen. We have, however, to deal with facts, not theories, and nothing is to be gained by following up that idea.

For the purpose of our discussion at this time we may divide the dairying countries of the world into two groups, according to whether production was restricted or stimulated by the war, and the conditions which followed, and which still prevail to some extent.

SUPPLIES FROM THE CONTINENT OF EUROPE

All the countries of continental Europe show greatly reduced exports since 1914, and Russia, which at that time was the second largest exporter of butter in the world, has ceased to figure in the export trade. The countries in the other group, which includes Australia, New Zealand, Argentine, and Canada, have as a whole, made great increases during that period.

During the twelve months ended June 30, 1914, there was received from the continent of Europe into the United Kingdom, 167,350 tons of butter, while for the same period in 1921 the quantity received from the same countries was only 54,904 tons. In 1914 New Zealand, Australia, the Argentine, and Canada sent 45,084 tons of butter to the United Kingdom, and 85,309 tons in 1921.

In the case of cheese, the continental supply was 23,209 tons in 1914, and only 7,940 tons in 1921. New Zealand, Australia, and Canada combined sent 95,686 tons in 1914, and 127,124 tons in 1921. During the actual war period the difference was even greater. For a year or two there was very little export from the continent, while the United States exported large quantities of cheese and some butter in the years 1915-16-17-18, reaching the maximum of 43,074,960 pounds of cheese in 1916. The United States is still a very large exporter of condensed, evaporated and powdered milk, but I shall refer to that later. It will help, I think, to make the position clearer if I take up the leading countries separately. The only complete and reliable figures of exports available for the different countries are those covering shipments to the United Kingdom. Other countries import some butter and cheese, but the quantities are relatively small and prices are governed very largely by the market in England. It will be understood, therefore, that the figures which follow are for butter and cheese exported to the United Kingdom, and for years ended June 30, unless otherwise stated.

The United Kingdom is the world's great dairy produce market, and it is the only one of permanent value to us.

RUSSIA

In 1914 Russia exported to the United Kingdom nearly 92,000,000 pounds of butter, and was second only to Denmark. To-day she is sending practically nothing. I have no information as to what the prospects are for a resumption of exports from that country.

DENMARK

Denmark's quota in 1914 was in round figures, 200,000,000 pounds of butter. In 1919 the quantity had dropped to 8,397,440 pounds. In 1921 it rose again to 106,000,000 pounds, or a little over half as much as in 1914.

SWEDEN AND NORWAY

Sweden contributed 40,000,000 pounds in 1914, and nothing at all in 1921. Norway was a small shipper in 1914, but was out of it in 1921.

FRANCE

France's share in 1914 was 25,000,000 pounds, and 593,600 pounds in 1921.

ITALY

Some interesting information has just come to hand respecting the dairying industry in Italy, through the Canadian Trade Commissioner at Milan. Summarized it is as follows:—

- (1) In 1913 the production of butter was 80,000,000 pounds, of which 8,000,000 pounds was exported, principally to Switzerland and the United Kingdom. The exports of cheese in 1913 were 66,000,000 pounds. The total production is not given.
- (2) Only small quantities of butter or cheese were exported during the war or since. The Government still prohibits export except under a special license.
- (3) There is now sufficient production for home needs and a surplus for export. Efforts are being made to have the export restrictions removed.
- (4) Switzerland, France, Argentine, and United States have been Italy's largest customers in the past. Comparatively small quantities of cheese have been exported to the United Kingdom, Germany, Canada and other places where Italians are living.

HOLLAND

Holland is the only continental country which has got back to anything like pre-war volume of exports. The other countries may be expected to resume their old position in the trade in the near future, but in all probability Germany and Austria will require larger quantities than formerly, as they are not now getting as much from Russia as they did before the war.

So much for those countries in which the dairying industry was more or less demoralized and reduced during the war period. We may now turn to the other group of countries which were fortunate enough to be outside the theatre of the war, and in which the high prices stimulated production to a greater or lesser extent. Let us take the Argentine first.

THE ARGENTINE

The Argentine Republic, as everyone knows, is a great live stock country. According to recent statistics there are 29,000,000 cattle in that country, of which 2,000,000 are given as milch cows. I am of the opinion, however, that this number includes only those cows that are actually milked. A great many cows are kept for the purpose of raising calves, and naturally they belong more to the beef type than to the dairy type. Previous to 1914 the surplus of butter for export was never more than about 10,000,000 pounds per year, and had shown no permanent increase for many years. The bulk of the export was to the United Kingdom, although small quantities were shipped to other South American and even to European countries. In 1916 the exports began to increase and during the eleven months ended November 30, 1921, 41,518,512 pounds of Argentine butter was received into the United Kingdom. In addition to this, a considerable quantity was shipped to the United States, to Italy, France, Belgium, and even some to Canada.

This enormous increase is the result of the high prices, coupled with labour conditions during the war. It has been said that the exports of butter from the Argentine would revert to the pre-war quantities after the stimulus of the high prices had

disappeared, but inquiries made through the Commercial Intelligence Branch of the Department of Trade and Commerce elicit the information that the firms engaged in the export of dairy produce think that the quantity will be maintained or even increased in 1922.

During the war a considerable quantity of Italian types of cheese, like Reggiano, Pecorino and Parmesano, were shipped to the United States. Now that these types of cheese can be secured from Italy in better quality, the demand for the Argentine article is falling off.

Within the last few days I have had inquiries from the President of the National Dairy Council of the Argentine as to the dairy laws in Canada, dairy organization, the rules and regulations relating to the grading, and the marking and export of dairy produce. He writes that he considers organization and control of export essential for the development of the industry in that country. I have also recently had a letter from the Argentine Embassy at Washington, asking for further information on a matter of export control referred to in a recent issue of our Dairy News Letter. The Argentine is evidently waking up to the possibilities of the dairying industry, and in their usual business-like manner they are preparing to adopt the latest and most up-to-date methods of control and supervision of export. Evidently it will be advisable to keep an eye on the Argentine in the future.

SOUTH AFRICA

The development of dairying in South Africa since 1913 is rather remarkable. In 1913 the imports of butter were 3,893,000 pounds. Exports nil. Imports of cheese in 1913 were 5,586,000 pounds. Exports nil.

For the first nine months of 1921 the exports of butter exceeded imports by 1,762,000 pounds, and the exports of cheese exceeded imports by 210,000 pounds; or in other words, there was a net increase of 5,653,000 pounds of butter and 5,796,000 pounds of cheese for nine months of 1921 as compared with the whole of 1913.

All cheese and butter are graded before they are exported and handled very much in the same manner as dairy produce from New Zealand is.

AUSTRALIA

Australia has devoted more attention to butter than to cheese. In 1914 the total quantity of butter exported to the United Kingdom was 58,410,240 pounds, while in 1921 the exports had increased to 81,119,360 pounds. The percentage increase in cheese is even larger, the figures being 2,390,080 pounds in 1914, and 7,293,440 pounds in 1921. Production in Australia is, however, rather uncertain owing to the prevalence from time to time of very severe droughts.

UNITED STATES

We have not in recent years looked upon the United States as a serious competitor in the butter and cheese trade, and it is a fact that, except during two or three years of the war the exports of these products from that country have been an almost negligible quantity. During the year ended June 30, 1914, the exports of all dairy products from the United States were valued at \$2,965,934, but the balance of trade in dairy products that year was a minus one as imports exceeded exports.

Under the war demand the export of butter, cheese and condensed, evaporated and powdered milk expanded enormously. During the years 1917 to 1920, inclusive, the value of the exports averaged \$97,711,557 per year. The largest item was condensed milk, amounting to 728,740,509 pounds in 1919. For the twelve months ended June 30 last the exports were valued at \$47,519,514 and consisted chiefly of condensed milk.

CONDENSED MILK

Condensed milk does not compete directly with butter and cheese, but it is a real competition just the same. If the United States supplies the world with condensed milk, other countries like Switzerland, Holland, Ireland, and Australia cannot do so and must produce butter and cheese for direct competition. For that reason it is necessary when studying the dairy situation to take into account all dairy products and not attempt to reach conclusions based on the statistics of any one or more product.

NEW ZEALAND

Last but not least we come to New Zealand. The development of the dairying industry in New Zealand during the last twenty years is an astonishing record, and one of which, coupled with the conditions existing in that country, is of very great significance to Canadian producers.

When the New Zealanders, as they frequently do, give your humble servant some credit for having helped them to get on the lines which have led to this development, I confess as a good Canadian to having rather mixed feelings over the matter. The only thing I can do now, however, is to use my special knowledge of the country in laying before you some facts of the growth of the industry, its present status and the probabilities of further development, as a sort of warning as to what you may expect from that country in the way of competition in the future.

Let us go back then to the years 1903 and 1904, in which our exports reached the maximum of 233,000,000 pounds of cheese and 34,000,000 pounds of butter. The following table gives the exports of butter and cheese from New Zealand for the years 1904, 1915, and for the year ended August 30, 1921:—

NEW ZEALAND EXPORTS

Year	Butter pounds	Cheese pounds
1904..	35,203,728	9,691,920
1915..	47,055,128	91,532,896
1921..	72,894,752	151,588,304

The exports of butter for 1921 may be a little abnormal on account of some "carry over" from the previous year, but even after making some allowance on that score the record on the whole is a very striking one, and New Zealand differs from most other countries in this respect, that the increased production due to the stimulus of high prices during the war will be permanent and not temporary as in the case of some other countries. I am afraid we have reached the point where it must be admitted that New Zealand exports are larger than ours, and that we now have to take second place among the cheese exporting countries of the world. I believe New Zealand is destined to be the greatest dairying country in the world, and I will give you some of the reasons why I think so.

At the present time sheep-raising is still the largest industry, but the great rise in land value makes it difficult for anyone to purchase good land at prevailing prices and raise sheep profitably. There will be large areas of rough upland unsuitable for dairying which will continue to be sheep country, but the more fertile areas are being fast converted into dairy farms. Whenever the high priced land has to change hands it generally goes into dairying.

New Zealand will never be a great cereal country. Production of cereals is only about sufficient for home requirements. During the war they imported wheat from Canada. Over the greater part of the North Island the rain fall is so frequent and so excessive as to make even the curing of hay a difficult matter. Dairying seems to be about the only business for which large areas of the country are suitable. At the

present time there are 43,000,000 acres in occupation. Of this area 25,000,000 is unimproved land, being partly bush and land which has never been broken, but which is used for pasture. There are 18,000,000 acres that have been cultivated, but less than 1,000,000 acres are devoted to grain crops. Out of the 18,000,000 acres 16,000,000 are in permanent grasses and clover for pasture.

THE CLIMATE

The climate is favourable, with no extremes of temperature. We have as cold weather in Ontario in October as they ever have at any time of the year, except at high altitudes, and the hottest weather is about like ours in June. The range of temperature in Wellington, the capital, during the year and a half I was there, was from 31° to 76° F.

The cows are at pasture the year round, and very little feeding is required in any part of the country; none at all in the greater part of the North Island. There is no large outlay for barns or stables. A milking shed is the extent of the buildings on most dairy farms. As a rule the whole area of the farm is in grass. The dairy farmer and his family have nothing to do but milk the cows and deliver the milk at the factory. This permits of the handling of large herds. I have known a man and his two sisters to milk regularly a herd of 90 cows, and herds of 100 to 200 cows are not uncommon.

LARGE FACTORIES THE RULE

In 1920 there were 384 factories that manufactured cheese and 153 that manufactured butter. Most of these factories have dual plants and can turn out either butter or cheese. They are for the most part organized on a co-operative basis.

The creameries operate chiefly on the whole milk plan; in some cases with contributory skimming stations. The centralized creamery as we have it on this continent practically does not exist.

Both cheese factories and creameries average very much larger outputs than ours do. Out of a total of 153 creameries in 1920 two had an output of over three and one-half million pounds each, and eight others made over one million pounds of butter. There were 384 cheese factories in operation that year, of which 65 made over 300 tons, 39 made 375 tons, 9 made over 600 tons, and 1 over 1,000 tons.

The small number of patrons to a factory is in even more striking contrast to Canadian conditions. Here are a few examples from the list published for 1920. In one factory 20 patrons made 242 tons of cheese; in another 9 patrons made 88 tons, 42 patrons made 437 tons, 7 made 86 tons, 65 made 829 tons, and in the largest factory of all there were only 66 patrons and the output was over 1,000 tons. One farmer had a factory for his own herd and turned out 88 tons. When I say that some factories made as many as 150 to 160 full-sized cheese per day it may give a better idea of size than tonnage does.

These factories are well built; equipped with the very latest and most improved machinery. For instance, a few years ago it was demonstrated that the flavour of the cheese was improved if the milk were pasteurized. A correspondent informs me that when the war prevented the factories from securing any more pasteurizing outfits from Denmark about half the cheese factories had been equipped to pasteurize all milk for cheese making.

The factories are well managed. The head cheese or buttermaker, who is called a "manager," receives a good salary, and the position is looked upon as a permanent one. Cheese and buttermaking is taken up as a career, and not as a stepping stone to something else. While the manager is held responsible for the quality of the product, he is not required to make good any losses on account of quality. If there are too many cheese, or too much butter of an inferior quality turned out, his services are dispensed with, and the position is too good a one to be risked in that way.

In addition to the manager there is a secretary, who gives all his time to book-keeping and the business details. In the case of the smaller factories a secretary may serve more than one factory. A more or less standard form of statement is issued to patrons. The annual statement and balance sheet is required by law to be in the hands of shareholders two weeks before the annual meeting. The directors meet weekly and go into every detail of the business, and scrutinize carefully the grader's certificates covering recent shipments.

Large factories frequently send their presidents or managers to Australia, or even to the United States and Canada, in order to keep abreast of the times. No less than four such delegations have called at my office during the past two or three years.

Now I am not saying these things to boost the dairying industry of New Zealand. I have no pleasure in making such statements. I merely wish to inform the producers of Canada as to the character of the competition which they will have to meet, and the necessity for organization and improvement if they are to meet it successfully.

There is, however, another side to the picture which should be presented in order to be perfectly fair. In the first place the high price of land in New Zealand is causing some concern. It is not uncommon for dairy farms without any buildings except a small house to sell for \$500 an acre, and sales have been reported at \$750 an acre. Of course all land is not held at these figures, but very little good land can be bought for less than \$150 to \$200 an acre.

This adds considerably to the cost of producing milk. It costs more to manufacture cheese and butter in New Zealand than it does in this country. Labour and supplies are more expensive. In a list of 22 cheese factories, the actual cost, not including interest on investment or profit to anyone, varied from 1.70 cents to 3.60 cents per pound. In six creameries for which I have the figures the actual cost of making butter ranged from 3.54 cents to 5.10 cents per pound. The manufacturing end of the business is conducted efficiently and is up to date in every respect, but the methods of milk production are rather crude, according to our standards.

During the winter season, with frequent rains and no frost, the milking yards and lanes get into very bad condition, and although the cows are pastured the year round there are four or five months when they suffer a good deal from exposure. The practice of covering the cows with rugs or waterproof blankets is followed by many farmers, but these get very dirty in the course of a month or two.

These conditions give rise to some trouble with the flavour of the cheese. As I have already said, they are now trying to improve matters by pasteurizing the milk used for cheesemaking, but while this may be an improvement in producing a cheese with a cleaner flavour, it is doubtful if their cheese, made from pasteurized milk, will ever have the positive cheddar cheese flavour which our best cheese have. In this we have the advantage.

The greater distance from market looks like a disadvantage, but I think it works out the other way, except for the higher freight charges, and for this reason. The voyage from New Zealand takes about five weeks. The cheese cannot reach the consumer until they are at least two months old, and because the route crosses the tropics refrigeration is necessary. The cheese are carried at a suitable curing temperature, and as a consequence reach the market in better condition than ours do that are shipped out at a few days old and may be on the retailer's counter by the time they are four weeks old.

CANADA

I pass on now to say something about the situation in Canada, and it will be of interest to compare our production in 1920 with what it was in 1914. The figures are as follows for cheese, creamery butter, and condensed milk:—

Year.	Cheese. Pounds.	Butter. Pounds.	Condensed and Evaporated Milk. Pounds.
1914.. . . .	169,478,340	83,991,453	27,831,596
1920.. . . .	149,548,595	111,691,718	84,132,341

If we take the total quantity of milk that the above production represents, we find that in round figures it was 3,533,000,000 pounds in 1914, and 4,253,000,000 pounds in 1920. The increase is equivalent to about 65,000,000 pounds of cheese.

But that is not all, for there has been an increase in milk, cream and ice-cream consumed. Total production increases steadily, although the proportion of the different products may vary. The complete figures for 1921 are not yet available, but it is known that there will be considerable increase in the quantity of cheese over last year and a decrease in the output of condensed and evaporated milk. Creamery butter shows a steady increase every year.

The decrease in cheese production since 1903, when it reached the high water mark, is frequently deplored. If it represented a decrease in total production it would be cause for regret, but when it is simply the result of milk being diverted into other channels to make more money out of it, there is no need to worry. To tell the truth, if we had produced as much cheese in 1921 as we did in 1903 I don't know where it would have been disposed of. We certainly would have had much lower prices.

During the years ended November 30, 1920 and 1921, the United Kingdom imported more cheese than was imported during the same period in 1913 or 1914.

On the whole the progress of production in Canada seems to be satisfactory. The number of cows is increasing, but the increase in milk production is due more to better cows and better feeding. Cow testing is producing results. The value of our total production in 1920 partly estimated was over \$263,000,000.

EXPORTS FROM CANADA

Our exports in years ended March 31, 1914 and 1921, were as follows:—

	1914 Pounds.	1921 Pounds.
Cheese..	144,478,340	133,620,340
Butter..	1,228,753	9,739,414
Condensed, Evaporated and Pow- dered Milk..	9,329,382	49,147,541
Fresh milk..	307,188 Gal.	1,508,618 Gal.
Cream..	1,323,929 “	1,279,195 “
Casein..	270,486 Lb.	Nil.

The total value in 1914 was \$21,193,168, and in 1921, \$52,863,867.

THE OUTLOOK

Now as regards the outlook, it would appear from what we know about New Zealand and the state of the market in the United Kingdom that we cannot expect to greatly increase our exports of cheese, but there does seem to be an opening for increased exports of butter. The market is not encouraging at present, but there are special reasons for it, such as the unexpectedly heavy shipments from New Zealand, non-employment in the Old Country, and the fact that the Government still has on hand a large quantity from the contracts which expired on March 31 last.

On December 6 it was reported that this holding amounted to about 50,000,000 pounds. It is bound to have a more or less depressing effect on the market until it is finally disposed of.

But we should never forget that our great market is at our own doors. We export only about one-fifth of our total production. This market is constantly growing. The average consumption of milk and its products in Canada is equal to about 1,000 pounds of milk annually per capita. If our population should grow at the rate of 100,000 per year there will be required annually an additional 100,000,000 pounds of milk to supply them. Then again, the home consumption per capita is increasing, as it is everywhere. The newer knowledge of nutrition has placed milk

and its products in a very favourable light, and the value of milk as a protective and nutritious food which is relatively cheap is being impressed on the public mind as never before.

Greater consumption of milk is being urged by health authorities and others who have no interest whatever in the sale of milk. The Dairy Branch hopes to accomplish something along these lines through the new division under Miss Campbell. A large increase in production will be required to meet this new demand. If every person in Canada should use an additional half pint of milk per week the quantity thus consumed would be equal to 25,000,000 pounds of cheese in a year.

The consumption of cheese should be increased, and it would be if we catered more to the home trade. It might easily be doubled, and that would mean another 25,000,000 pounds a year.

Now I think I have said enough to show that there is nothing in the outlook for the industry that should be discouraging to anyone. We shall undoubtedly have keener competition in the future than we have had in the past, but we can meet this competition with our present lead in the premier position of our cheese if we are prepared to exert ourselves and thus meet our competitors on even ground.

In conclusion, let me summarize as briefly as possible some of the things which seem to me to be important and deserving of thoughtful attention by Canadian dairymen at this time.

- (1) There is need for better organization at this time.
- (2) The standardization and grading of butter and cheese for export is essential for success under the new conditions of competition in the world's markets. Independent grading is also of the utmost importance as an incentive to the production of butter and cheese of highest quality. Without some plan which gives adequate reward for skill and industry we cannot hope to hold our own in the matter of quality.
- (3) Home consumption of dairy products should be encouraged. There is a large unsatisfied demand in this country for prime quality, mild flavoured, well matured cheese in small sizes.
- (4) The foolish and injurious practice of shipping cheese from the factories when they are only a few days old should be discontinued. Both buyers and salesmen are to blame. If producers studied the marketing of their products as they should, they would never allow this practice to continue.
- (5) If something is not done to encourage a better class of men as a whole to take up cheesemaking, the results will be disastrous. The position of cheesemaker should be made attractive enough in point of salary and living conditions to encourage a good man to make it his life's career. The salaries paid now in many cases are ridiculously small for a position calling for so much skill and experience and involving so much responsibility.
- (6) The vicious system under which cheesemakers are required to make good any loss on inferior cheese should be abolished. Under such a system the milk producer or the factory owner has a false sense of security, and it is only human nature for the cheesemaker to try to cover up defects in the cheese under such a system, and this leads to dishonest practice. Factories engage cheesemakers without due consideration as to their qualifications, thinking they protect themselves by this system of guarantee. The system is unjust in most cases, because many of the faults are due to the condition of the milk, and beyond the control of the cheesemaker.
- (7) It is difficult to see how the position of cheesemaker can be greatly improved in many of the factories which are too small to provide sufficient revenue to pay a decent salary to the cheesemaker. With increased cost of manufacturing, larger factories have become an economic necessity.

The cheesemaking industry would be greatly improved by combining many of the existing factories into larger and more economical ones.

THE MARKETING OF DAIRY PRODUCE

An Address Delivered by J. A. Ruddick, Dairy Commissioner, before the
Annual Convention of the Western Ontario Dairymen's
Association, London, January 12, 1922

IT has been said that we here in Canada have been so engrossed with the production end of the dairy business that we have, to some extent at least, neglected the marketing end. It may be that there is some justification for the statement. Anyhow I think it can be shown that producers in this country have not taken much interest in the disposal of their products, and have paid less attention to market problems than producers in other countries have. Probably the attitude may be due to the fact that we have had an ever-ready market, and that the business of exporting our surplus has been, on the whole, conducted honestly and with a remarkably small toll absorbed by those who have handled it. The further fact that Canadian cheese has topped the market for so many years may also have had something to do with it.

Nevertheless, the manner in which cheese and butter are handled from the time they leave the factory should be a matter of vital interest to the producer, because the condition of the article as it reaches the retail counter is quite as important as the matter of quality, and has a very important bearing on the price which the producer will ultimately receive for his milk. Then again, as regards the business side of marketing, there are many points on which the producer should have the fullest information. Are the tolls taken by the middlemen fair and reasonable? Are there more middlemen than are necessary? or is each one a necessary and useful link in the chain of service which carries the goods from producer to consumer? Are prices unfairly manipulated to the advantage of the dealer and to the disadvantage of the producer? These are all questions which the producer has a right to ask, and on which he is entitled to the fullest possible information.

In any study of the marketing of dairy produce it is necessary to recognize that the trade is international in its scope and character, and that prices are based on the world's supply and demand, rather than on local conditions. Improved transportation and marketing facilities, and the high value in relation to bulk or weight, make it possible to ship dairy produce successfully to almost any part of the world. Freight charges are not prohibitive, as they are in the case of many other food products of greater bulk and weight in proportion to value. Thus a scarcity in any part of the world is easily and quickly supplied from some other quarter.

There is an advantage to the producer in this world-wide character of the dairy markets, because it makes for stability. The dairy farmer must plan two or three years ahead, and if his market were controlled by local conditions the price would be subject to much more violent fluctuations than it is under the regulating influence of world-wide conditions. An unusually large production in any one country is likely to be offset by opposite conditions in others, and thus a reasonable balance or equilibrium is maintained.

Another point which ought to be considered is this, that the price of butter and cheese is not determined by the cost of production except as it applies in a world-wide sense, or over a comparatively long period of years. That is to say, if the cost of production in Canada should for some reason be suddenly increased next spring, it would not, nor could not, immediately affect the price of our cheese or butter on the world's market. If the costs of production were to increase generally throughout the world,

the decreased supply that would follow would, after a time, make itself felt by widening the margin as between supply and demand. Local conditions affect prices only as they influence the general world average. That, of course, is no argument against the study of the cost of production, looking towards more economical methods for the purpose of increasing the margin of profit.

The dislocation of markets during and since the war has emphasized the importance of a wider knowledge of marketing conditions. The high prices during the war period stimulated production in some countries, while in others the industry, as far as exports were concerned, was wholly or in part destroyed. These conditions have started cross currents and opened new channels through which trade in dairy products has been diverted from the pre-war status. It is not possible to say at present how long it will be before the trade gets back to its old position, or if it will ever do so. In any case present conditions demand a broad outlook on the subject more than ever before.

As a contribution to the subject at this time I propose to recite some of the leading features of the system of marketing dairy produce in countries that compete with us in the world's market.

HOLLAND

I begin with Holland, because I am inclined to think that organized marketing of dairy produce dates back further in Holland than in any other country in the world. Holland is a great dairying country, whether it is considered from the point of view of intensive production, organization, or volume of the total output. Both cheese and butter are produced. Of cheese there are several varieties. Probably the best known is the Edam or round cannon-ball shape, usually stained red or yellow on the surface. These cheese are produced principally in North Holland, and there are a number of very ancient market places where they are sold regularly every week. The market at Alkmaar, which is one of the largest, has been in existence for over two hundred years. The cheese are brought from the factories or the farms, as the case may be, and arranged in heaps on the market square. If it rains they are covered with tarpaulins. Buyers and sellers come together and dicker over the price. A sale is consummated by the two parties striking the open palms of their hands together rather smartly.

The cheese are then carried into the adjoining weighhouse, where they are weighed by an official of the market. After weighing, the porters carry the cheese to the local warehouse of the buyer, or to a barge or other conveyance if they are to be shipped any distance. The market at Alkmaar, as at other places, is conducted by the municipality. A charge is made of about one-quarter cent per pound for the facilities provided.

A rather novel, and more modern, method of selling by auction is now in vogue at other places. One of the most important markets of this class has been in operation at Maastricht since 1895. Sellers bring their produce to the market and register it something after the manner in which butter and cheese are registered on our boards in this country. The different lots are put up and auctioned in the following manner:—

There is a large dial with a wide range of prices marked on the circumference. The pointer, which is operated by electricity, is set at the high point, and when started slowly descends the scale. Each buyer has an electric button which he can operate unseen by any of his neighbours. When the pointer falls opposite the price which any buyer is willing to pay he presses the button, the pointer stops, and his number is indicated to the clerk and the sale is recorded. Another lot is put up and dealt with in the same way. The apparatus is so arranged that no two buyers can register at the same time, and the identity of the purchaser is not disclosed for the time being.

In some cases these market houses straddle a canal, with the buyers on one side and officials and apparatus on the other side. Cheese, butter, or other produce offered for sale comes in front of the buyers on a barge, and remains there until it is sold and then passes out to make room for more. All cheese and butter are weighed before sale at these markets.

Butter and cheese for export are largely purchased by dealers, very much as it is done in this country. A very rigid system of control over export is exercised by the Government of Holland. Registered marks are supplied for all butter and cheese which are pure and come up to a certain standard of quality.

IRELAND

Over sixty years ago a market for dairy butter was established in Cork, Ireland. A large hall was provided, and the farmers brought their butter in firkins and other packages on certain days for the purpose of sale. The butter was graded or classified by officials of the market into a number of different grades, and the grade was marked on each package with a tool somewhat similar to that which is used by a gauger in marking barrels and hogsheads.

I use the past tense in connection with the Cork market because there is not very much business done there at present, the creamery industry having superseded the manufacture of dairy butter, and the output of the creamery was never marketed to any extent in the old Cork market. I visited that market in 1905 and I was informed that even then business had dwindled to comparatively small proportions. I mention this because, as far as I am aware, the grading of butter in the Cork market was the first official or semi-official grading of butter ever attempted. There is now a system of voluntary control in Ireland something after the Dutch system, under which a special mark is used on Irish creamery butter intended for export. Shipments to England come under this measure of control.

DENMARK

Probably no country is more often quoted than Denmark in connection with the dairying industry. The wonderful development and expansion of the industry in little more than one generation, the widespread co-operative organization, covering almost every phase of dairying, and the high reputation of Danish butter on the market, and the measures taken by producers themselves to protect that reputation, have attracted much attention and have been the theme of many writers. From the very beginning of the Danish export trade the United Kingdom has been its principal market, although a considerable quantity of butter has always been sold to Germany.

At first Danish merchants bought up the surplus butter, usually on yearly or half-yearly contracts, and sold it to English and German importers. Gradually the English importers began to buy direct from the creameries through representatives stationed in Denmark, and the bulk of the butter exported is now handled by these English firms. In some cases the creameries export direct to English merchants, and there is some butter exported by creameries direct to retailers in England, but the quantity handled in this way is not large. Of recent years co-operative and private creameries have combined to form co-operative export associations, which act as export agents, selling direct to British importers. This movement is reported to be gaining ground. The butter is exported on orders received from England at a definite price, f.o.b. Denmark. Contrary to a somewhat general impression, there is practically no butter exported from Denmark on a consignment basis, or to any agency in England for sale there.

In some lines of produce the Danes have organizations in the United Kingdom to handle the sale of products, but practically all butter is sold before it leaves the country.

A very important and rather interesting institution in connection with the sale of butter in Denmark is the Copenhagen Butter Quotation. The Quotation Committee was first appointed in 1894. It consists of ten or twelve members selected from the various interests in the trade, and a chairman who is not connected with the industry in any way. Before the war this committee functioned as follows: It met every Thursday to study the situation and to fix a quotation for the following week. The practice was to take the actual prices being paid in England and Germany and to correct these by what was termed "the feeling of the market." If the market was strong, something was added to the actual price in fixing the quotation. If it were weak, the quotation was dropped accordingly. Consideration was also given to reports as to supply and demand in the various markets. When the committee reached a decision the quotation was immediately published in the Danish newspapers and cabled to the press in England.

The quotation received wide publicity generally throughout Scandinavia, the United Kingdom, and Germany, and had a very important influence on the butter market in all these countries. It was not only a guide to the trade, but it gave information to both producers and consumers as to what the actual difference was between the price which one paid and the other received. It had the effect of placing all the cards on the table. There was, of course, nothing binding on merchants to pay prices on a level with the quotation, and frequently, as competition dictated, they paid what was called an "over price." This became so marked in the years before the war that the quotation began to lose some of its importance and influence.

A large amount of business was transacted on the basis of the quotation. Contracts were entered into by dealers to pay the weekly quotation, minus a differential for inferior quality. There was some resemblance between this practice and what is known in the Canadian trade as "regular" business, whereby a merchant agrees to pay factories the ruling price on a certain country board, or some other such basis, but I think it will be generally admitted that the Copenhagen Quotation is a safer basis for all concerned than the ruling price on the Canadian cheese or butter boards. I understand that the committee has been revived since the war, and that the quotation again rules in f.o.b. sales. Presumably it follows the old lines, but I am not sure about that.

Any reference to the marketing of Danish dairy produce would be incomplete without mention of the national brand. No butter may be exported unless it bears the "Lur" or national brand. This brand may not be used on any butter of foreign origin, and no creamery is permitted to use it unless the butter complies with all legal requirements, and the quality of the output comes up to a certain standard. Note this: no cheese may be exported from Denmark until it is at least six weeks old. Quite a contrast from our foolish practice.

NEW ZEALAND

I pass on to New Zealand, the country which above all others is already our chief competitor in the British market, and which promises to be a much stronger one in the future. When New Zealand began, during the eighties, to have a surplus of butter and cheese, there was no machinery or organization for handling the export thereof. It was the practice in those days, a practice which still prevails to some extent, for importers in other lines to arrange to ship the surplus produce of the factories to merchants in the Old Country on a consignment basis, and thus balance their accounts. Later on, as the volume of business grew, English and Scotch houses sent out buyers, or arranged with local firms to represent them.

It has always been the rule in New England to contract with the factories for the whole season's output at the opening of the season. In some years practically the whole surplus has been sent forward on a straight consignment basis, or sometimes with a guarantee of a certain return without recourse in case of a falling market. Then again,

the whole season's output would be purchased at a definite price. This was made practicable by the fact that at the time of the year when the transaction took place (October and November) the bulk of the Canadian cheese had passed into the dealer's hands, and the market was more or less stabilized for the next six months.

The consignment plan was never satisfactory, and this became more apparent as the volume of exports increased. It is an axiom in trade that a commission merchant will not as a rule get as much out of the goods as the man who has his money invested therein and whose profit depends on the sale. The consignee gets his commission no matter what price he secures. Further, the presence of a large quantity of goods on the market, or the knowledge that they are to arrive for sale in this manner, always has a bearish influence and makes for a weak market.

There are a number of live organizations or associations in New Zealand to look after the interests of the producers. These organizations devote their energies to the business end of the industry, dealing with ocean rates, conditions of shipment, and general marketing conditions. Some of them send representatives to the Old Country, who keep in touch with what is going on in the dairy world. They do not concern themselves with questions relating to the practice of cheese and buttermaking. Membership in these associations is by factories, each factory member being entitled to a certain number of representatives. Discussion at meetings is confined to members, and outsiders are not permitted to take part except on invitation. Individual factories frequently send their presidents or managers abroad to study conditions and methods in other countries. No less than four delegations of that kind have called on me during the last year or two.

There is no buying and selling of dairy produce under the tryer in New Zealand as is the practice in Canada. The transaction rests on the reputation of the factory and on the grader's certificate. As a matter of fact it is mostly disposed of before it is made.

Under the law of 1895 no butter may be exported from New Zealand without first being graded. Cheese grading became compulsory about 1899. Dairy produce may be exported only through certain specified ports. Grading stores are located at these ports. The butter and cheese are shipped regularly from the factories to one of these stores. It is graded on arrival by the Government graders, who maintain a supervision over it until it is loaded on the ship which carries it to England.

Every cheese factory, creamery, private dairy, or place where dairy butter is blended or reworked must be registered. Every package containing cheese or butter of any description must be branded with the registered number and a true description of the contents according to the classes defined in the regulations. These classes are "dairy butter," "milled butter," "dairy cheese," and "factory cheese." Creamery butter must be branded with the words "New Zealand Produce, Pure Creamery Butter, No. . . . Registered." The same form is used in branding all the different classes. The branding of "milled butter" (dairy butter blended and reworked) must be in red ink, and all other classes must be branded in dark coloured ink. It is permissible to add the name and address of the factory, and as a matter of practice all factories now use a uniform impressed brand put on with a die, which gives the particulars required by law and the name of the factory or brand under which it is known. Individual New Zealand factories are well known in the markets through this system of branding. There is no such thing as an "exporters' brand" in the New Zealand trade.

The New Zealanders are fortunate in having a very suitable timber out of which to make butter boxes, which, together with neat branding, gives the New Zealand package a very attractive appearance, and that is a matter of no small importance in marketing.

I might go on to show how the capable management of New Zealand factories is an important factor in the marketing of their products, and to point out how the existence in that country of what we would call very large factories makes it relatively easy to secure good management, but that is another story, which I shall refer to later if there is time.

UNITED STATES

Something might be said about the marketing of dairy produce in the United States, but except for condensed milk, the exports are such a small proportion of the total production that all marketing schemes are designed to meet the requirements of the domestic trade. Nevertheless, we are inclined to underestimate the importance of the United States in the export field. That country has been for some years past the largest exporter of dairy produce in the world. The value of their exports has been nearly double the value of ours. Because of the very large proportion of condensed and evaporated milk in these exports, and because our attention is focused on butter and cheese, we have overlooked the part which the United States has been playing in the international dairy trade in recent years.

The competition is only an indirect one for the most part, but none the less real on that account. When the United States exports condensed milk, there is that much less for other countries like Ireland, Switzerland, Holland or Australia to supply, so they turn more of their surplus milk into cheese and butter and compete with us directly.

Reference should be made to the system of market reporting in the United States as carried out by the national Government. A rather extensive system of collecting and distributing market intelligence has been developed, which includes prices, holdings, imports and exports, weather conditions and general surveys covering various products. No other country has carried this idea quite so far, but there is probably no other country in which such a system of reporting could be of much service, owing to its great size and large number of primary markets.

CANADA

It now remains to say something about the marketing of dairy produce in Canada for export. Prior to the advent of the cheese factory in 1864, any small surplus of butter or cheese was exported chiefly to the United States by wholesale grocers. The export of dairy produce did not become a specialized business until 1865. In that year the well-known exporter of Montreal, Mr. A. A. Ayer, began business. Mr. Edwin Caswell, of Ingersoll, Ont., began exporting cheese in 1866. In those days (I speak of the Ingersoll district) the buyers bought the cheese on the shelves at the factory and sent their own men around to box and prepare them for shipment.

At a meeting of the Ontario Dairymen's Association in the spring of 1873 it was decided to hold what were called "cheese fairs" at Ingersoll, Stratford, and Belleville, and the first one was held at Ingersoll on May 20 of that year. The practice at first was for the salesmen to carry plugs of cheese to these fairs in glass bottles, which were submitted to the buyers. On May 29, 1877, a new feature was introduced into the selling of cheese at Ingersoll, when the different lots were disposed of by auction, and thus the "call system" was established. I am indebted for these dates to Mr. Frank Hearn, who had them dug up from the files of the *Ingersoll Chronicle*.

As the factory system developed "cheese boards" were organized in the different districts in Ontario and to some extent in Quebec. The call system, or auction, has never been put in force at some of these markets, buyers and sellers simply coming together to bargain. In other cases the cheese and butter are brought to the market and sold under the trier.

This system of selling on "boards" has been developed to a greater extent in Canada than in any other country, but I am not certain whether the idea originated in Canada or New York state. I do know that no organization of this kind existed in New York state as late as 1871. The cheese boards, through the reports of sales thereon, soon became the medium of information for salesmen as to the tendency of prices, and spoiled the chances which buyers had at one time of making scoops on a sudden rise in the market, before the fact became generally known. One might go

on to discuss the working of these country boards, and to point out some of the abuses which have crept in, such as secret settlements, the influencing of salesmen, how prices are manipulated at times, etc. It may be open to argument as to whether the boards have not served their purpose and whether, in the evolution of the dairy industry, the time has not come when some other method of sale should be substituted. In any case a very large proportion of the butter and cheese produced in this country has always been disposed of by the factories through other channels. The common arrangement whereby a factory agrees to accept the weekly ruling on some board is really a parasite on the board system, and it is probably responsible for some of the bad odour which has become attached to the boards.

It is not our purpose at this time, however, to discuss the merits or demerits of any system of selling, but rather to state the situation as it exists.

The system of grading and selling by auction at Montreal which has been in operation for a number of years for the disposal of creamery butter and cheese made in the province of Quebec appears to have given satisfaction. A very large proportion of the total production of that province has been disposed of in this way, except that last year another arrangement was made for cheese, the details of which have been kept secret. The butter is still sold by auction to the highest bidder.

The sale of Ontario cheese in the same way was instituted in 1920, and if we are to judge by the large increase in business during the past year the results have also been satisfactory. Of course any such system has to meet the strenuous opposition of those persons whose business it may interfere with, and there is apt to be a good deal of misrepresentation.

I am not interested in any particular scheme for the sale of cheese by auction, but I do believe, as I have often stated, that it is an ideal way of handling dairy produce in the primary market, but it may not always be practicable. The department has undertaken to grade any cheese or butter offered for sale in this manner, no matter who conducts the sale.

A new organization in the trade at Montreal holds out promise of some usefulness. I refer to the Montreal Mercantile Exchange, which now meets regularly at the Board of Trade, where butter, cheese and eggs are disposed of to the highest bidder. Offerings are made by the members for purchase by other members present. Markets of this kind have been in operation in the United States and appear to have served the purpose of exchange of goods between members of the trade. Goods received on commission are sold in this way, and it would appear a good way of securing fullest competition.

It will not be out of place to refer to a Government service, carried out by the Dairy Branch, in connection with the marketing of Canadian dairy produce, which is unique and the like of which is not provided in any other country in the world. I refer to the cargo inspection maintained under the direction of the Dairy and Cold Storage Branch at Canadian and United Kingdom ports. This service has been in existence now for twenty years. The first duty assigned to your humble servant on his return from New Zealand in 1900 was to organize this service in Montreal. All butter, cheese and other perishable products are carefully examined when deposited on the docks at Montreal for shipment overseas. If the packages are defective, or if there is evidence that the goods have been exposed to unsuitable temperatures, the facts are reported along with other information as to the stowage in the ship, the exact location in the ship, the names of shippers, consignees, etc.

Locked, recording thermometers are stowed with all perishable cargo in the different chambers. When the ship arrives at a port in the United Kingdom other inspectors are on hand to watch the discharge and make careful notes of the condition of the cargo coming from the ship. The thermograph records are returned to Ottawa, where copies are made, which are supplied to the steamship companies, posted on the Board of Trade, Montreal, and given to any shipper who asks for a copy. This service was responsible, a number of years ago, for bringing about a great improvement in the handling of butter and cheese on the docks at London and Liverpool. Even yet

there are occasions when complaint is justified. One of our inspectors recently found a shipment of butter had been left for eleven days in a wharf shed at Glasgow. The facts were reported to the shipper on this side and to the consignee on the other side.

A further aid in the marketing of dairy produce in this country which has not been provided by any other country that I am aware of, exists in the arrangement for refrigerator car service for the carriage of butter and cheese. The pick-up service for butter in small lots has been of great service to the butter trade, because of the impracticability of individual shippers securing iced cars for small lots. In the case of iced cars for cheese the arrangement is somewhat different, the department simply agreeing to pay the icing charges on a fixed number of cars per week over certain lines, the shippers to make their own arrangements for securing the cars.

For several years past the Dairy Branch has conducted a dairy market intelligence service. A weekly market letter is issued, and twice-a-week paid night lettergrams are sent to various officials in different provinces and districts, and collect wires are sent regularly to any person who asks for them.

Canada has some advantages and disadvantages in connection with the marketing of dairy produce which are peculiar to the country. In the first place we have to contend with a long rail haul for a considerable portion of the dairy produce which is exported. In the matter of packages, too, we are at some disadvantage. The Canadian cheese box is altogether too flimsy, and a large proportion of the packages arrive on the market in a broken condition. Efforts have been made from time to time to devise an improved cheese box, but so far without much success. It seems to be difficult to do so without getting away from the special type of round box which has always been the distinctive package for Canadian cheese. New Zealand cheese is put up in crates, which are strong and durable enough to carry the cheese to destination without breakage. This package could be adopted for Canadian cheese, but we would lose the value of the distinctive package. In New Zealand, Australia, and Denmark they have an advantage over us in the material which they have available for making packages. We do not give this question of package enough attention. A great deal of the breakage in the cheese boxes could be avoided if the box always fitted the cheese as snugly as it should. Much bad management is exhibited in the way in which cheese are boxed.

One of our important advantages is that we have in Montreal the greatest cheese market in the world, and one on which I should say there is more competition than on any other. Of course we have the great advantage at present with respect to our cheese that it stands absolutely at the top in point of general quality over any cheese of similar type which enters into international trade. This is an advantage which is very easily lost, and I believe we are in greater danger of losing it at the present time than we have been at any period in the last twenty years, owing to the rapid advance which is being made by some of our competitors and the businesslike manner in which they are proceeding to capture a large share of the world's trade.

I have no time left to speak of the home market, that market which absorbs about eighty per cent of our total production. It's a growing market, and there is room for a large increase in the home consumption of milk and its products. If our per capita consumption of cheese alone were as large as it is in the United Kingdom we would have very little, if any, to export.

The Dairy Branch hopes to be instrumental in bringing about an increased consumption of dairy products through a milk utilization service, which will be in charge of the latest addition to the dairy staff, in the person of Miss Helen G. Campbell.

In closing I would say that this subject has proved to be bigger than I thought it was, and I have had to leave unsaid many things that might have been said. I cannot pretend to have advanced anything new or striking, but I have tried to bring together some facts relating to the subject in the hope that the mere statement of them might awaken an interest on the part of those who are most concerned. The Dairy Branch will continue its policy of studying these questions and endeavouring to stimulate interest by the dissemination of such information as may be collected, by articles in

the dairy press, by public addresses, and in the pages of the monthly Dairy News Letter, the publication of which seems to have been so generally approved during the last two years.

If I may summarize the situation as it appears to me I would do so as follows:—

- (1) Canadian dairy producers have not interested themselves as much as producers in other countries have in marketing problems connected with the disposal of their products.
- (2) The present is a critical time in the history of the dairy industry, owing to conditions arising out of the war.
- (3) Canada is the only important dairying country in the world that does not exercise some form of control over its exports.
- (4) Competition in the world's markets will be much keener in the future than it has been in the past.
- (5) Dairymen's organizations cannot control prices, but they can do much in securing the fullest possible return to the producer that world prices will permit.
- (6) Producers should study world conditions in order to adjust their business to changing circumstances.
- (7) Canadian dairymen have depended too much on Government action instead of taking the initiative themselves and thus increasing their own power and self reliance.